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Financial Analysis of Hella Company

Finanční analýza společnosti Hella

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5. Conclusion

Bibliography
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List of Annexes
Annexes

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The declaration

"Herewith I declare that I elaborated the entire thesis, including all annexes independently."

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Contents:

1. Introduction

This thesis is write about what is the financial analysis and the financial analysis of Hella company. Financial analysis is very important for the the company's managers, because they will make decisions of the company's economics based on these analysis. It also can give the investors very useful information to help them decide whether they should buy the shares issued by this company or not. The creditors can decide whether they should borrow money to the company or not based on the financial analysis of the company. So it is very necessary for the people who care about the company's financial position to know how to make financial analysis.

The goal of this thesis is to analyze Hella company's financial position by using common-size analysis, financial ratio analysis and pyramidal decomposition from 2012 to 2015.

This thesis will be divided into five parts. The first part is the introduction, the second part is description of the financial analysis methodology, the third part is financial characteristics of Hella company, the fourth part is financial analysis of Hella company and the last part is the conclusion.

The first part is chapter 1, in this chapter we introduce the goal of this thesis and the main content of each parts.

The second part is chapter 2, in this chapter we will introduce three types of financial statements, they are balance sheet, income statement and cash flow statement. And then we will describe common-size analysis, it can be divided into two parts, they are horizontal common-size analysis and vertical common-size analysis. Next we will write three methods to make the analyze, they are financial ratio analysis, DuPont analysis and influence quantification.

The third part is chapter 3, in this chapter we will describe the profile of Hella company. We will describe the basic information about Hella company by introduce the history, structure and competition of Hella company. And then we will make common-size analysis of Hella company, we will use the data from Hella company's annual report from 2012 to 2015. And the method we use is from chapter 2, we also

will make short balance sheet and income statement of Hella company, which are based on the basic form of financial statement we have written in chapter 2.

The fourth part is chapter 4, in this chapter we will use financial ratio analysis and pyramidal decomposition to analyze Hella company's finance. We will calculate profitability ratios, liquidity ratios, solvency ratios and active ratios of Hella company. We also will use DuPont analysis and methods of gradual changes to do the pyramidal decomposition of Hella company's return on equity. This chapter is the most important chapter in the whole thesis, because in this chapter, we will know the specific information of Hella company's financial position by these analysis.

The last parts is chapter 5, in this chapter we will make the summary of the whole thesis and the results from the analysis of Hella company.

2. Description of the Financial Analysis Methodology

In this chapter we want to introduce financial analysis methodology which we will use to analyze the Hella company's financial situation. We divided this chapter into five parts, the first part is the financial statements, this part is very important. Because if you want to use the financial analysis methods which is described in the next four parts, you must know and use the data from the financial statements. And in the next four part, we will describe common-size analysis, financial ratio analysis, DuPont analysis and influence quantification.

Financial analysis is the process of evaluating businesses, projects, budgets and other financial-related entities to determine their suitability for investment. The aim of financial analysis of a company is to make the evaluation of the company's financial position at present and in the future. It is very necessary for the managers of the company to know the company's financial position. Only do they know that, they can make better and more suitable decisions for the company. So in this chapter, we will describe these four methods in detail.

2.1 Financial statements

Financial statements can collect the information of organization's financial results, financial requirements, and cash flows. There are three types of financial statements, they are balance sheet, income statement and cash flow statement. It is really useful for the managers of the company to make their financial decision based on the financial data from these statements.

2.1.1 Balance sheet

The balance sheet can show people the value of the company's assets and the company's liabilities at a given point in the time from an accounting perspective. Balance sheet can be divided into two big parts, the one is the assets, we always put it on the left in the balance sheet. The other one is the shareholder's equity and liabilities, we usually put them on the right in the balance sheet. The balance sheet is shown like the Tab. 2.1.

Tab. 2.1 An example of the balance sheet

Balance sheet	
Current assets	**Current liabilities**
Cash and cash equivalents	Commercial paper
Receivables	Accounts payable
Inventories	Total current liabilities
Total current assets	
Fixed assets	**Fixed liabilities**
land	Long-term debt
Buildings and improvements	Deferred income taxes and other
Less accumulated depreciation	Total fixed liabilities
Goodwill	**Shareholders' equity**
Total fixed assets	Preferred stock
	Common stock
	Retained earnings
	Total shareholders' equity
Total assets	**Total liabilities and shareholders' equity**

Source: CFA Institute (2009)

The relationship between assets and liabilities and shareholder's equity is:

$$Liabilities + shareholder'equity = Assets. \quad (2.1)$$

This formula can tell us that the assets of a company is equal to liabilities and shareholder's equity, we can check the correctness of balance sheet based on this rules. The assets of a company in the balance sheet can from investing activities, operating activities and financial activities. They can be classified as fixed assets and current assets. The fixed assets also can be called long-term assets, they always have long life and low liquidity. The maturity of the fixed assets is more than one year. The main fixed assets are tangible assets, intangible assets and financial investments, like shares, bonds and so on. The current assets have short life, always less than one year, the

liquidity of current assets are higher than the fixed assets. It include receivables, inventories, cash and cash equivalents.

The shareholder's equity of a company represents the shareholders' investment, it can show people how much capital the company have, and these capital belong to the owners or shareholders. The shareholders' equity usually can be classified as common shares, preferred shares, retained profits and profit of the current year.

The liabilities shows the source of company's capital, which is provided by the creditors. The main creditors of a company are banks, other companies and individual person. It represents money which is borrowed from others and must be paid back before the maturity. If the money must be paid back within 12 months, we call it current liabilities. Accounts payable, accrued expenses and short-term notes all are the current liabilities. And the long-term liabilities is the liabilities which can be pay back more than one year, it also can be called as fixed liabilities. It include loans from banks, issued bonds, etc.

2.1.2 Income statement

Income statement is the financial statement that shows expenses, revenues and net income of a company over a period of time from an accounting perspective as the same as balance sheet. The managers of the company use this financial statement to compare the company's revenues and company's costs during a given period, the period is always one year. From this statement, people can know whether the company earn money during a year. If the revenues of the company is higher than its expenses, that means the company has profits, but if revenues is lower than expenses, that means the company loss money in that year, it isn't a good situation for a company.

Income statement is very important for lots of financial analysis methods, because we must use the data from this financial statement when we do those analysis, like the calculation of return on equity and so on. We will describe that in details in the next part. We can see the income statement as the Tab. 2.2 shown.

Tab. 2.2 An example of the income statement.

Income statement
Revenues
Cost of sales
Operating,selling,general,and administrative expenses
Operating income
Minority interest
Interest income
EBIT
EBT
Taxation
EAT

Source: CFA Institute (2009)

In the income statement, the basic equation is computed as:

$$Revenue - cost = Net\ Income . \tag{2.2}$$

And the costs must be spent in the ordinary activities of the company, like the sales expenses, the electric charge and so on. When we calculate the revenues and the costs of the company, we need to know which activity they belong to. There are two kinds of activities, they are operating activity and financing activity.

The operating activity is the most common and daily activities of the company to earn money. The results of operating activities in income statement is EBIT, that means operating profit before interest and taxes., it also called operating profit or costs. The revenues of the operating activity is from the goods selling or the services. And there are lots of costs from the operating activity. For example, the raw material consumption, electricity consumption, costs of goods sold , depreciation, salaries and wages paid to employees, ad costs and so on.

The financial activity is the activity which is happened in the financial markets. Revenues from this kind of activity are interest received, dividends received, coupons received, etc. The costs is the coupons paid, if the bonds is issued, and the interest

paid. The results of financial activities in income statement is EAT, that means earning after taxes, also called net income. For a company, they can have methods to increase the revenues and decrease the expenses from operating activities. But it is really hard for them to control and change the revenues and expenses from financial activities, because it depends on the market rate, market price or some other factors.

2.1.3 Cash flow statement

Cash flow statement can show people the company's cash receipts and cash payments over a period of time, the period is always one year. We can divided the cash flow into two parts, they are inflows and outflows. Inflows is the money which we received, and the outflows is the money which we spent during the given period. We can see the cash flow statement as the Tab. 2.3 shown.

Tab. 2.3 An example of the Cash flow statement

Cash flow from operating activities
Income from continuing operations
Depreciation and amortization
Deferred income taxes
Decrease(increase) in accounts receivable
Increase in inventories
Increase in accrued liabilities
Cash flow from investing activities
Payments for property and equipment
Investment in international operations
Proceeds from the disposal of fixed assets
Other investing activities
Cash flow from financing activities
Dividends paid
Income tax paid
Interest paid

Source: CFA Institute (2009)

There is an important thing, we must know that the cash flow statement is not the same as the income statement. Because the income statement is calculated on the accrual basis, but cash flow statement is based on cash basis, so the profits in these two statement is different. For example, if we spend some capital to buy the raw materials for productions, and we don't pay the money at present, we will put it into income statement as the expenses of operating activities, but not in the cash flow statement. When we make cash flow statement, we always divide cash flow into three parts: operating activities, investing activities and financial activities.

Cash flow from operating activities is from day-to-day company's activities, like the sold of goods, the productive process and so on. So this part can measure how much cash flow of the company during a given time from their production or their services.

Cash flow from investing activities can show people how mach inflows and outflows of the company which is from selling and purchasing of investments. Investments include tangible assets, intangible assets and long-term investments in the shares and bonds.

Cash flow from financial activities can show the changes of liabilities, loans, dividends, coupons and so on. Cash from issuing shares of bonds and cash from credits and borrowings is the cash inflows. The cash outflows is the paying out dividends, repay bonds, repay credits and borrowings, etc.

2.2 Common-size analysis

Common-size analysis is the analysis of the data from financial statements and their changes over time. People who use common-size analysis want to identify the trends and main differences of the data from the financial statements during a given period. When using common-size analysis, we have lots of choice of the comparing of the data, for example, we can compare the data from one company at different time or the data from different companies at the same time.

There are two types of common-size analysis, they are horizontal common-size analysis and vertical common-size analysis. We will introduce them in details in the following parts.

2.2.1 Horizontal common-size analysis

Horizontal common-size analysis is the analysis of the evolution of the data which is from financial statements over a period of time, or calculate their changes in regard to a given period as the benchmark.

The horizontal common-size analysis is used if the statements have two or more periods. We always choose the first period of the statement as the base period, and then we can use the data from later periods to compare with the data from the base period. Calculation of the changes of percentage is based on this formula:

$$Absolute\ change = U_t - U_{t-1}. \tag{2.3}$$

$$Percentage\ change = \frac{U_t - U_{t-1}}{U_{t-1}} \cdot 100\%. \tag{2.4}$$

where U_t is amount of analysis period, U_{t-1} is amount of previous periods, the previous period can be last year.

2.2.2 Vertical common-size analysis

Vertical common-size analysis is the analysis to calculate the selected benchmarks' changes in the proportions at a point-in-time. It can shows each item on a statement as a percentage of a base figure within the statement. We will use this analysis method in the balance sheet and the income statement of Hella company in the next chapter.

In the balance sheet, the total assets, total equity and total liabilities can be the benchmark. The individual asset items, liability items and equity items are shown as a percentage of the benchmark. In the income statement, revenues and expenses can be the benchmark. The individual revenues items and individual expenses items are shown a the percentage of the selected benchmark. When we calculate the percentage, we use the following formula:

$$E\% = \frac{X_i}{\sum_n X_i} \cdot 100 \quad . \tag{2.5}$$

where $E\%$ is the proportion of the project, X_i is the item, $\sum_n X_i$ is the sum of item.

2.3 Financial ratio analysis

Financial ratios analysis is the analysis of financial data' comparison in the form of financial ratios, the goal of financial ratios analysis is to asses the financial health of the company. The basic data of financial ratios analysis is financial data and market data.

Financial ratios analysis is the most common method to analyze the company's financial standing. By using these financial ratios, creditors, investors and the company's managers can know how well the company's financial health is. And when we want to make the comparison between different companies, we can comparing the same financial ratio from different companies in the same period. Financial ratios are useful and important indicators of financial analysis.

In this thesis, we will introduce five types of financial ratios, they are profitability ratios, liquidity ratios, solvency ratios, asset management ratios and market-base ratios. Each ratio has it own formula for calculation, they represent different meaning and used in different particular situations. In the next five part, we will talk about them one by one.

2.3.1 Profitability ratios

We use profitability ratios to analyze the company's ability to collect profits from the invested capital. For almost all the profitability ratios, the higher value they have, the larger profit the company will get. And if a company has a high profitability ratio, we can write that this company has a better competitive position than other companies. So if we use them, we can see company's ability to get profits and the company's competitive position very clearly.

There are lots of profitability ratios, here we will introduce the four basic ratio, they are: return on assets, return on equity, net profit margin and operating profit margin.

Return on assets (ROA) can measure earning after taxes or earning before interest and taxes as a percentage for every unit of the company's assets. This ratio can help people to know how much profits the company can get by using their assets. Calculation of return on assets (ROA) is based on this formula:

$$ROA = \frac{EAT}{A}, or \tag{2.6}$$

$$ROA = \frac{EBIT}{A}. \tag{2.7}$$

where *EAT* means earning after taxes, *A* means assets. *EBIT* means earning before interest and taxes.

ROA for the company which goes to public, can has a great changes of their ROE in different time, and how it will change depends on the industry. If the number of ROA is high, it is very good for the company, that means the company get lots of earnings by using less investment.

The next ratio is **return on equity (ROE)**. This ratio can measure a company's efficiency at collecting profits from every unit of shareholders' equity. ROE is expressed as a percentage and calculate as:

$$ROE = \frac{EAT}{equity}. \tag{2.8}$$

where *EAT* is earning after taxes, we also can use net income. Net income is before dividends paid to common shareholders but after dividends paid to preferred shareholders.

When we use this method, we should notice that the preferred shares do not belong to the shareholders' equity. Generally speaking, the higher the ROE is, the better for the company. The ideal ROE for a company is higher than 15%, and if ROE is higher than 20%, it is on a excellent level.

Next one is **net profit margin,** it can measure earning after taxes as a percentage from every unit of revenues. The net profit margin can show how much money the company earned is translated into profit. It can be defined as：

$$NPM = \frac{EAT}{Rev}. \quad . \tag{2.9}$$

where *EAT* means earning after taxes and Rev is the abbreviation of revenue.

The data of this formula is from income statement, sometimes we also can use net income instead of EAT. There are four methods for the company to improve their net profit margin. The first one is to improve the selling of the production, the second

one is improve the price of the production or services, the third one is reduce operating costs, the last one is reduce operating expenses.

The last one is the **operating profit margin,** it shows people the company's abilities to generate revenues and control their operating costs. It is also can show the company's abilities to manage their operations. It gives the company's owner lots of important information about the company's profitability. The formula of operating profit margin is :

$$OPM = \frac{EBIT}{REV}, or \tag{2.10}$$

$$OPM = \frac{OP}{Rev}. \tag{2.11}$$

where *EBIT* is earning before interest and taxes, *REV* is the abbreviation of revenue, *OP* is the abbreviation of operating.

Revenue of this formula comes from income statement, the number of revenue can not be negative, it just can be positive or zero. When revenue of a company is zero, that means the company do not have revenue at that time. There are some factors can effect operating profit margin, they are the average price per one production, the costs per one production, sales quantity, the ability of control the management expenses and the ability of control the selling expenses.

What is said above are the main basic ratios of profitability ratios. In the next chapter, we will use them to analyze the HELLA company's profitability.

2.3.2 Liquidity ratios

Liquidity ratios only can be positive. They can be used to analyze company's liquid assets, current liabilities and debt. Liquid assets is in the form of cash or the assets which can be translated into cash in a short time. Current assets are the assets whose maturity is less than one year.

The liquidity of a company can show us the ability of the company to have cash available when they should pay back their shot-term debt. If a company has high liquidity ratios, that means the company has more possibilities to meet their

short-term debt. The default risk of this company is smaller, so the company which has high liquidity ratios is more safety for the creditors and investors.

There are three main liquidity ratios, they are current ratio, quick ratio and cash ratio. Quick ratio is more accurate than current ratio.

Current ratio can measure the amount of current assets per every unit in current liabilities. Sometimes we also call it working capital ratio. It is mainly used to give an idea of the company's ability to pay back its liabilities with its assets. The formula of current ratio is:

$$current\ ratio = \frac{current\ assets}{current\ liabilities}. \quad . \tag{2.12}$$

As what we have written before in the financial statement, current assets and current liabilities are the assets and liabilities whose maturity is less than one year. Current assets always include cash, marketable securities, inventory and account receivable. And current liabilities always include debt, account payable and others.

The second liquidity ratio is **quick ratio**. Quick ratio is more strictness test of company's liquidity than current ratio, the reason is that the current assets are adjusted for inventories, they due to the fact, so the liquidity of them are less. Quick ratio can be defined as:

$$quick\ ratio = \frac{current\ assets\text{-}inventories}{current\ liabilities}, or \tag{2.13}$$

$$quick\ ratio = \frac{cash + account\ receivable}{current\ liabilities}. \tag{2.14}$$

We want to make an example to explain this formula. If the quick ratio of a company is 2, that means this company has 2 dollars of liquid assets available to cover every one dollar of current liabilities. And the important factor which can effect the reliability of quick ratio is the ability to translate receivable into cash.

The last ratio is **cash ratio**, this ratio is a more conservative look at the company's ability to pay back its liabilities than many other liquidity ratios. Here we use the assets which are in the form of cash. Cash ratio is calculate as:

$$cash\ ratio = \frac{cash + marketable\ securities}{current\ liabilities}. \tag{2.15}$$

Marketable securities can be sold immediately at the market within a few hours or days. This formula can reflect the company's ability to pay back their liabilities without account receivable and the sold of inventories.

2.3.3 Solvency ratios

Solvency ratios can measure the company's abilities to pay back its long-term liabilities. Sometimes we call it financial leverage ratios because they measure how the company is financed.

The solvency ratios show us whether the company can use their cash flow to pay back the short-term liabilities and long-term liabilities. These ratios are very important for investors and creditors, because they can give them lots of helpful information about the company's default risk. If the ratio is low, that means the company has a large probability to default on its debt obligations.

There are three types of solvency ratio: debt ratio, debt to equity ratio and interest coverage. We will introduce them in details in the following parts.

Debt ratio is a particular solvency ratio. It shows what proportion of the company's assets is financed by liabilities. The higher this ratio of a company, the more leveraged the company is, the financial risk of this company is higher. Debt ratio is calculated by this formula:

$$debt\ ratio = \frac{total\ debt(total\ liabilities)}{total\ assets}. \tag{2.16}$$

We want to make an example to explain this formula: if total debt of a company is 20 euros, and this company has total assets of 100 euros, that means the debt ratio of this company is 20%.

And there are lots of factors can effect debt ratio, like the changes of profits, net cash flows, assets and debt. If the debt ratio of a company is high, that means the company has more money to use, but they should pay more interest for the debt. And if the debt ratio of a company is low, that means the interest expenses of this company is lower, and the risk is lower as well, but they may don't have enough money for operating activities. And for different people, the ideal debt ratio is different in their own stand.

Next ratio is **debt to equity ratio**. This ratio is very similar to debt ratio, it describe the amount of the company's liabilities relative to the company's equity. This ratio can be used at personal financial statements as the same as corporate ones, so we also call it personal debt to equity ratio. The formula of it can be represented in the following way:

$$debt\ to\ equity = \frac{total\ debt(total\ liabilities)}{total\ equity}. \tag{2.17}$$

If the ratio of a company is higher than one, that means the company uses more debt for assets financing than equity. If the ratio is equal to one, that means equity equal to debt, they are the half of total assets.

Interest coverage also called times interest earned. It tells people the extend to which the company's operating profit is able to cover their current interest payments. In the normal case, the interest coverage of a company is bigger than one means the company has the ability to pay back interest. To the contrary, if the interest coverage of a company is lower than one, that means the company don't have the ability to repay the interest. The formula of interest coverage is:

$$interest\ coverage = \frac{EBIT}{interest\ paid}, or \tag{2.18}$$

$$interest\ c\ overage\ = \frac{operating\ \ profit}{interest\ p\ aid}. \tag{2.19}$$

The higher a company's interest coverage ratio, the more debt expenses burden the company has. So the manager of a company should pay attention to this ratio, when the ratio is high, they must do something to reduce this ratio. Generally speaking, the ratio is higher than 2.5 is a warning sign for the company.

2.3.4 Activity ratios

Activity ratios ratios can measure how well the company uses its assets. Activity ratios also called assets management, it shows people how much the company invested in a specific assets relative to the revenues which are collected by the assets.

There are four basic ratios of assets management ratios: collection period (ACP) , accounts receivable turnover (ART), inventory turnover (IT) and total assets turnover (TAT).

These ratios are very important in determining whether the company's management is doing a good job of collecting revenues and cash from its resources.

For the company, they want to translate their production into cash or sales as soon as possible, the reason is that the smaller the turnover, the higher revenues the company will get in a year.

Average collection period (ACP) can measure the translation of accounts receivable into cash. It shows people how many days the company takes to collect the its receivables. The formula of it can be represented in the following way:

$$ACP = \frac{account\ re\ \ ceivable}{revenues} \cdot 360 . \tag{2.20}$$

We make an example to explain this formula: a company has total credit sales of 100,000 euros during a year, and has an average amount of accounts receivables, the accounts receivable is 50,000 euros. So we can know its average collection period is 180 days, that means the company need to spend around 180 days to translate the receivables into cash.

Account receivable turnover (ART) can show people how many times the accounts receivable generate during a year, it also called days sales outstanding. In order to calculate this ratio, the average accounts receivable are divided by the average daily sales during the given period. The formula of this ratio is:

$$ART = \frac{revenues}{accounts\ receivables} . \tag{2.21}$$

For a company, they want the account receivable turnover can be smaller, because they can get the account receivables in a short time and get more current assets. So they can give the debtors a discount if they pay the money before the maturity in order to reduce the account receivable turnover. But for the payer, they have different thinking, they may want the maturity can be longer, so they can have more time to collect the money for pay or use the money to do other things before the deadline.

Inventory turnover (IT) can measure how many times inventory is sold or used in a given period such as a year. If the inventory turnover is high, that means the account receivables is low, the speed of turnover is high.

This ratio should be compared whit industry averages, a low turnover means the company has poor sales and a high ratio means the company has strong sales. It can be defined as:

$$IT = \frac{costs\ of\ goods\ sold}{average\ inventory}. \tag{2.22}$$

A low turnover is usually a bad sign for the company, because the company should spend more days to sale the inventory in a single cycle. In that situation, the company may can't get enough money to cover their expenses in time.

Total assets turnover (TAT) is an important indicator which tells people the company's operating quality by using total assets. The higher the assets turnover ratio, the better the company is performing. A high turnover means the ability of the company to sale their production or services is stronger.

Generally speaking, the more times of the company's turnover is or the less days per one turnover means the company's turnover speed is more quickly and their operating ability is stronger . The formula of TAT is:

$$TAT = \frac{revenues}{total\ assets}. \tag{2.23}$$

There is an example to explain this formula: if total assets turnover of a company is 2, that means the company can get 2 euros of revenues per one euro of assets.

2.3.5 Market-based ratios

Market-based ratios is based on financial data and market data. There are four types of measures: earning per share (EPS), price to earning ratio (P/E), dividend payout ratio and dividend yield.

Earning per share (EPS) is the final result of the company's profitability. A high earning per share means the company's ability of management, production's selling and technology are good, these ability can help the company to create more

profit by using less resource of the company. The formula of it can be represented in the following way:

$$EPS = \frac{net\ income}{number\ of\ \ shares}. \tag{2.24}$$

Earning per share is considered as a very important single when the company makes the decision of the price of a share.

Price to equity ratio (P/E) is a ratio which is used to analyze the company's share price per every unit of earning. Sometimes it also called the earning multiple or the price multiple. The formula of it can be represented in the following way:

$$P/E = \frac{market\ sha\ re\ price}{EPS}. \tag{2.25}$$

Generally speaking, a high price to equity ratio means the investors expect a higher earning growth in the future of the company.

Divided payout ratio shows how much dividends per share the common share's shareholders can get from every unit of earning. The dividend payout ratio shows people how much money the company returns to the common share's shareholders. It can be calculated by this formula:

$$payout\ ratio = \frac{dividend\ per\ share}{EPS}. \tag{2.26}$$

The payout ratio is helpful for the shareholders to decide whether they should buy the company's common shares or not.

Dividend yield is a financial ratio that shows people how much dividends the company pays out in every year related to its share price. For calculation, yields of a year are usually using the previous year's dividend yield, or using the latest quarterly yield and multiplying it by four, then use the result divided by the share price. The formula of it can be represented in the following way:

$$dividend\ yield = \frac{dividend\ per\ share}{share\ market\ price}. \tag{2.27}$$

Dividend yield is an indicator which is used to describe the relationship between share price in the market and the company's financial position.

Because these ratios are main based on the market, it is difficult for the company to control them, so we don't use them in chapter 4.

2.4 DuPont analysis

DuPont analysis is created by the DuPont Corporation in the 1920s. We can make the pyramidal decomposition of return on equity by using this method. For calculation, we use the assets' gross book value rather than the assets' net book value in order to produce a higher **return on equity (ROE)** for the company**.** The formula of ROE can be represented in the following way:

$$ROE = \frac{net\ profit}{equity} = \left(\frac{net\ income}{revenues}\right) \cdot \left(\frac{revenues}{total\ assets}\right) \cdot \left(\frac{total\ assets}{equity}\right). \qquad (2.28)$$

where $\left(\frac{net\ income}{revenues}\right)$ is net profit margin, $\left(\frac{revenues}{total\ assets}\right)$ is assets turnover, $\left(\frac{total\ assets}{equity}\right)$ is financial leverage. And if we separate $\left(\frac{net\ income}{revenues}\right)$, it can be shown like this:

$$\frac{net\ income}{revenues} = \left(\frac{net\ income}{EBT}\right) \cdot \left(\frac{EBT}{EBIT}\right) \cdot \left(\frac{EBIT}{revenues}\right). \qquad (2.29)$$

where $\left(\frac{net\ income}{EBT}\right)$ is tax burden, $\left(\frac{EBT}{EBIT}\right)$ is interest burden, $\left(\frac{EBIT}{revenues}\right)$ is EBIT margin. So ROE can be shown as**:**

$$ROE = \left(\frac{net\ income}{EBT}\right) \cdot \left(\frac{EBT}{EBIT}\right) \cdot \left(\frac{EBIT}{revenues}\right) \cdot \left(\frac{revenues}{total\ assets}\right) \cdot \left(\frac{total\ assets}{equity}\right). \qquad (2.30)$$

We decompose return on equity into five parts. They are assets turnover, financial leverage, tax burden, interest burden and EBIT margin. They are the main factors which can effect the return on equity of a company. The the influence of every factors is changeable, and can be both negative or positive in the different situation.

2.5 Influence quantification

There are three methods of Influence quantification, they are methods of gradual changes, logarithmic decomposition method and functional decomposition method.

They can analyze the indicators whose changes have caused the changes of the basic ratio. They also can show us what kind of component ratios is contributed to the changes of the basic ratio at most.

2.5.1 Method of gradual changes

This method can quantify the changes of the basic ratio by the changes of the component ratio. In the case of decomposition with three component ratios:

$$\Delta x_{a1} = \Delta a_1 \cdot a_{2,0} \cdot a_{3,0}, \tag{2.31}$$

$$\Delta x_{a2} = a_{1,1} \cdot \Delta a_2 \cdot a_{3,0}, \tag{2.32}$$

$$\Delta x_{a3} = a_{1,1} \cdot a_{2,1} \cdot \Delta a_3. \tag{2.33}$$

where x is the basic ratio, Δx is the absolute change in the basic ratio, a is component ratio, Δa is absolute change in the component ratio, Δx_{a1} is the absolute change of the basic ratio caused by the change of the first (a_1) component ratio.

2.5.2 Logarithmic decomposition method

The advantage of logarithmic decomposition method is we just need one formula for the calculation of the impact quantification no matter how many component ratios we have. So this method is more convenience than the first one.

Impact of the i-th component ration on the change of the basic ratio is calculates as follow:

$$\Delta x_{ai} = \frac{InI_{ai}}{InI_x} \cdot \Delta x\ . \tag{2.34}$$

where x is the basic ratio, Δx is the absolute change in the basic ratio, $I_x = \frac{x_1}{x_0}$ is the index of change in the basic ratio, $I_a = \frac{a_1}{a_0}$ is the index of change in component ratio.

Although this formula is simple, when we use it we should pay attention that we can use it only when I_{ai} and I_x is positive, if these number are negative, we need to chose other methods for calculation and analysis.

2.5.3 Functional decomposition method

Functional decomposition method works with relative changes of basic and component ratios. If there are three component ratios, the formula is:

$$\Delta x_{a1} = \frac{1}{R_x} \cdot R_{a1} \cdot \left(1 + \frac{1}{2} \cdot R_{a2} + \frac{1}{2} \cdot R_{a3} + \frac{1}{3} R_{a2} \cdot R_{a3} \right) \cdot \Delta x \quad , \qquad (2.35)$$

$$\Delta x_{a2} = \frac{1}{R_x} \cdot R_{a2} \cdot \left(1 + \frac{1}{2} \cdot R_{a1} + \frac{1}{2} \cdot R_{a3} + \frac{1}{3} R_{a1} \cdot R_{a3} \right) \cdot \Delta x \qquad (2.36)$$

$$\Delta x_{a3} = \frac{1}{R_x} \cdot R_{a3} \cdot \left(1 + \frac{1}{2} \cdot R_{a1} + \frac{1}{2} \cdot R_{a2} + \frac{1}{3} R_{a1} \cdot R_{a2} \right) \cdot \Delta x \qquad (2.37)$$

where x is the basic ratio, Δx is the absolute change in the basic ratio.

Applicable regardless of the signs of the relative changes:

$$\Delta x_{relate} = R_x = \frac{x_1 - x_0}{x_0} . \qquad (2.38)$$

$$\Delta a_{i\,relate} = R_{a_i} = \frac{a_1 - a_0}{a_0} . \qquad (2.39)$$

When we use influence quantification, we have four steps, the first one is to calculate the basic ratio values for each period and the absolute change value. The second step is decomposition of the basic ratio into *n* component ratios and then check that whether the decomposing is correct or not. Next one is the calculation of the component ratio values for each period. The last step is quantification of the impact of the change in component ratio on basic ratio.

3. Financial Characteristics of Hella Company

In this chapter, we will introduce the financial characteristics of Hella company. Only when we know the financial characteristics of the company, we can do the financial analysis of this company. This chapter is divided into two parts：basic description of the company and common-size analysis of Hella company.

3.1 Basic descriptions of the company

In this part, we will make basic descriptions of Hella company, it includes: history, structures and competition.

Hella is a global, independent, family-owned company boasting around 32,000 employees at over 100 locations in more than 35 countries. The Hella Group develops and manufactures lighting and electronic components and systems for the automotive industry. In the Aftermarket segment, Hella also has one of the largest trade organizations for automotive parts, accessories, diagnostics and services within Europe.[1]

Hella group has became one of the top 40 automotive parts suppliers in the world and one of the 100 largest companies in German industrial in the fiscal year of 2014/2015. This company has lots of teamwork with different companies, and these teamwork provide added value for their customers. Hella company put customers at first, so they set up companies in all of the key regions around the globe in order to make sure providing their customers .convenient and swift services.

From 1996 to now, Hella company has set up 13 different productions and has the development with 3 joint venture. It also create a management offices with 5332 employees all over China. We can say that the market in China is very important for HELLA company.

3.1.1 History of Hella company

Hella company is born on 11 June 1899, Mr.Sally Windmüller set up the company “Westfälische Metall-Industrie Aktien-Gesellschaft” in the town of Lippstadt, Germany. And in 1908, Hella trademark was created.

[1] Source: http://www. hella.com./

In 1937, Hella company has more than 1000 staffs, but at the end of the second world war, they only has 45 employees. The first subsidiary is founded in German in 1951, and they set up their first international company in Australia in 1961.

In 1986, Hella company change the name of the company, the new name is "Hella KG Hueck & Co". There are over 20,000 employees of Hella company in the world in 1990. And in 1992 they found first affiliate group in the Eastern Europe. The joint ventures established in China and South Korea in 1996, three years later, joint ventures formed with Behr is founded.

Hella company changes in corporate form in 2003 and the industries division introduces its first project-LED street lighting in 2008. In 2014, Hella company opens international guest house with meeting facilities and a sports center.

There is a big change for Hella company in 2014. Hella company goes to public in Frankfurt in 2014, it is not only a family-owned company but also a public company. In that year, Hella company issued its shares and collect lots of money from the shares.

3.1.2 Structures of Hella company

There are three segments of Hella company, they are Business segment, Business segment aftermarket and Business segment special applications. And business segment can be divided into two parts: business division lighting and business division electronics.

Business segment

The first part of this segment is the business division lighting. They offer the customers a wide range of productions covering all aspects of automotive lighting, like signal lamps, headlamps and combination rear lamp, lighting electronics and interior lamps.

The second part of this segment is the business division electronics. Over the past few years, they got a large progress both on the number and complexity of the electronic components used in automotive. The ranges of their production portfolio is from complex body electronics to various electronics components.

Business segment aftermarket

The number of productions in Hella business segment aftermarket is over 40,000. They can offer lots of great and powerful product combinations to the independent carport and the wholesalers of automotive parts. The Hella original equipment segment also provide the service of the equipment and diagnostics business for carports.

Business segment special applications

The business segment special applications supplies the target groups lots of things, the range is from the producers of construction machinery to the energy suppliers with innovative lighting and electronic productions.

3.1.3 Competition

Hella company has lots of competitors, like Magneti Marelli and Valeo. Magneti Marelli is an international group which committed to the design and production of hi-tech systems and components for the automotive sector. And Valeo is an automotive supplier in the top of the automotive industry, this company is the partner to all automakers in the worldwide.

Compare Hella company to this two companies, the key factor to Hella company's success is their advanced technology and aftermarket expertise. Hella has one of the largest aftermarket organizations for automotive parts, diagnostics, accessories and services. So Hella group has became one of the top 40 automotive parts suppliers in the world in 2014.

3.2 Common-size analysis of Hella company

Common-size analysis is the analysis of the changes of the data which are from financial statement over time. In this part, we will describe Hella company by common-size analysis from 2012 to 2015 in order to identify the trends and main differences of the data from Hella company's financial statements during a year.

For the calculation of the data which we used in common-size analysis, we simplified the balance sheet and income statement of Hella company. The simple balance sheet of HELLA company is in Tab. 3.1, and the complete balance sheet you can find in

Annex 1. The simple income statement of Hella company is in Tab. 3.2, and complete income statement you can find in Annex 2.

Tab. 3.1 Simple balance sheet of Hella company(1,000 euro)

	2012	2013	2014	2015
Non-current assets	1 532 055	1 862 824	2 046 200	2 281 080
Current assets	1 783 393	2 058 712	2 412 337	2 635 867
Total assets	3 315 448	3 921 536	4 458 537	4 916 947
Non-current liabilities	1 017 941	1 563 324	1 670 915	1 657 785
Current liabilities	1 232 270	1 150 978	1 445 561	1 349 468
Shareholders' equity	1 065 237	1 207 234	1 342 061	1 909 694

Tab. 3.2 Simple income statement of Hella company(1,000 euro)

	2012	2013	2014	2015
Sales	4 810 213	4 999 078	5 343 327	5 834 691
Cost of sales	-3 543 344	-3 654 455	-3 866 380	-4 280 770
Gross profit	1 266 869	1 344 623	1 476 947	1 553 921
Other income	23 006	35 621	0	16 298
Distribution expenses	-391 589	-422 217	-435 361	-455 459
Administrative expenses	-176 884	-194 701	-197 421	-196 869
Other operating expenses	-388 269	-468 177	-537 617	-543 931
Operating (loss)/profit	333 133	295 149	306 548	373 960
Finance income	26 610	22 654	39 967	55 543
Finance costs	-14 012	-19 181	0	0
EBIT	345 731	298 622	346 515	429 503
Interest	-38 336	-32 383	-37 757	-35 878
EBT	307 395	266 239	308 758	393 625
Taxation	-76 294	-59 647	-79 176	-98 172
EAT	231 101	206 592	229 582	295 453

From Tab. 3.1 we can see from 2012 to 2015, the total assets of Hella company are still increased and current assets are higher than fixed assets. We also

can know that shareholder's equity are still increased in the past four years as the same as total assets from Tab .3.1. However, trend of liabilities of Hella company is not the same as total assets and shareholder's equity. Liabilities increasing from 2012 to 2014, but decreasing in 2015. Or we can say liabilities in 2015 is almost equal to it in 2014, they do not have a clear change. The detailed analysis of balance sheet from Hella company is in the next part.

And from Tab .3.2 we can know in 2015, revenues from selling has a huge increasing, but costs of selling in that year increased too. In 2015, Hella company get the largest net income in the past four years, because in that year they really got lots of revenues from selling, the difference of sales between 2014 and 2015 is around 500 thousands. Although costs in 2015 and taxes in 2015 are increased, the changes of them can not be compared with the changes of sales. The detailed analysis of Hella company's income statement is written in the next part.

In the following parts, we will make vertical common-size analysis and horizontal common-size analysis of HELLA company based on these two short financial statements.

3.2.1 Vertical common-size analysis of Hella company

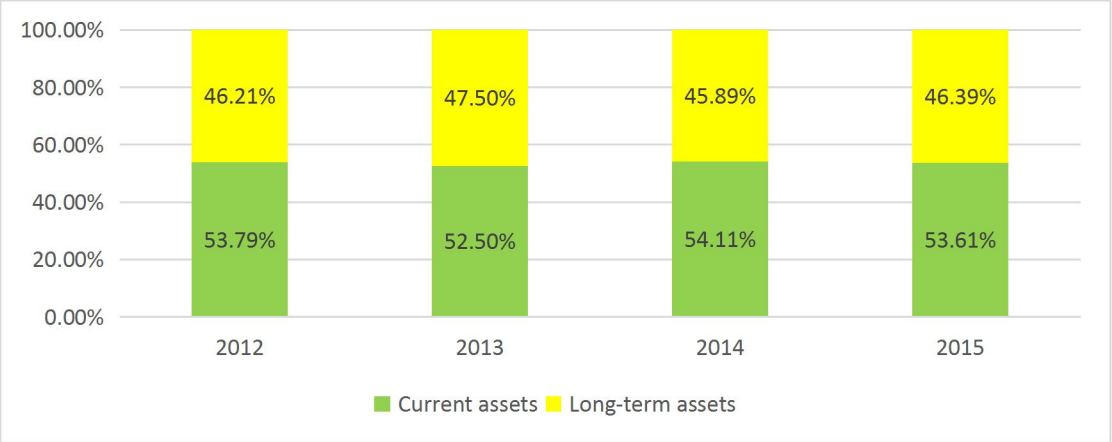
This part is the vertical common-size analysis of Hella company. Vertical common-size analysis is the analysis of the changes in the proportions of the selected benchmarks. The benchmark we used in balance sheet are total assets, total liabilities and total equity, and the benchmark we used in income statement are revenues and expenses. The items are shown as the percentage of the benchmark.

Firstly we calculate the proportion of each item in total assets, the main item is current assets and fixed assets. The current assets include cash and cash equivalents, financial assets, trade receivables and so on. The presented results of calculation is in Tab. 3.3, The percentage changes are expressed in Chart 3.1.

Tab. 3.3 The proportion of each item in total assets (%)

	2012	2013	2014	2015
Current assets	53.79	52.50	54.11	53.61
Cash and cash equivalents	12.95	12.15	14.29	12.26
Financial assets	1.27	5.30	7.96	8.24
Trade receivables	19.52	16.76	15.52	17.07
Other receivables and non-financial assets	3.08	2.61	2.64	3.09
Inventories	16.39	14.79	12.96	12.38
Current tax assets	0.59	0.59	0.60	0.50
Non-current assets held for sale	0	0.29	0.13	0.07
Long-term assets	46.21	47.50	45.89	46.39
Total assets	100.00	100.00	100.00	100.00

Chart 3.1 Vertical common-size analysis of assets.



From Tab. 3.1 and Chart 3.1 we can see that during these four years, the proportion of current assets in total assets and the proportion of long-term assets in total assets did not have a large change. They are almost the same as each other, and equal to half of total assets. That means Hella company has a stable capital structure in the past four years. We can say that Hella company has a great running of their operating, investing and financing activities. The reason is if a company can keep a stable capital structure, that means they have enough capital to support their business and has a high liquidity of these capital.

And we can see the proportion of inventories from 2012 to 2015 is decreasing. Hella company has became an international company in the world and in 2014 they really made a great selling of the products. It is not hard to see the reason why the proportion of inventories became less than the past year.

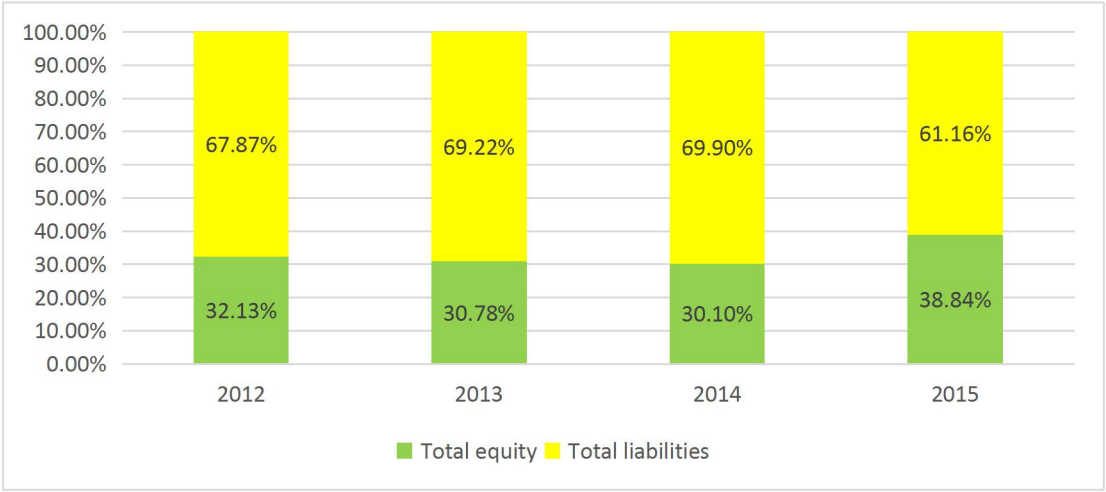
The proportion of financial assets in 2012 is 1.27 and in 2015 it becomes 8.24. The reason of its reducing is as time went by, more and more financial asset appears, companies have lots of choice, and financial assets have many advantages which the other assets do not have, so they put more capital in financial assets.

Then we calculate the proportion of each item in total equity and liabilities, the main item is long-term liabilities and current liabilities, the presented results of calculation is in Tab. 3.4. The percentage changes are expressed in Chart 3.2.

Tab. 3.4 The proportion of each item in total equity and liabilities (%).

	2012	2013	2014	2015
Total equity	32.13	30.78	30.10	38.84
Total liabilities	67.87	69.22	69.90	61.16
Long-term liabilities	30.70	39.87	37.48	33.72
Current liabilities	37.17	29.35	32.42	27.45
Total equity and liabilities	100.00	100.00	100.00	100.00

Chart 3.2 Vertical common-size analysis of equity and liabilities.



In Tab. 3.4 we can see total equity is decreased at the first three years but increased in 2015. And only at the first year, current liabilities is higher than

long-term liabilities, from 2013 to 2015, current liabilities still lower than long-term liabilities. And during these four years, total liabilities is more than total equity, that means capital of Hella company is mainly from liabilities.

From Chart 3.2 we can find the proportion of total equity and total liabilities has a big change between 2014 to 2015. Proportion of total liabilities is decreased and proportion of total equity is increased in 2015. The reason is total liabilities between 2014 to 2015 do not have much different, but total equity in 2015 is more than it in 2014, so the proportion of equity in 2015 is increasing.

We also made the vertical common-size analysis of income statement of Hella company. The first benchmark is revenues, and the items of revenues are sales, other income and financial income. We calculate the proportion of each item in revenues, the result shown as Tab. 3.5 .

Tab. 3.5 The proportion of each item in revenues (%).

	2012	2013	2014	2015
Sales	98.98	98.85	99.26	98.78
Other income	0.47	0.70	0.00	0.28
Finance income	0.55	0.45	0.74	0.94
Total revenues	100.00	100.00	100.00	100.00

We can see the main revenues of Hella company is from sales. Especially in 2014, the proportion of sales in total revenues is 99.26%, it is really a high proportion. The reason is Hella is focus on selling products to their customers. They has one of the largest business segment aftermarket, they give customers better services than lots of their competitors, so more and more customers decide to buy their products. Selling of products increases, so the proportion is increased.

And then we chose expenses as the benchmark, the items of expense are cost of sales, distribution expenses and so on. The results of the calculation of the proportion of each item in expenses are presented as Tab. 3.6.

Tab. 3.6 The proportion of each item in expenses (%).

	2012	2013	2014	2015
Cost of sales	78.50	76.79	76.76	78.16
Distribution expenses	8.67	8.87	8.64	8.32
Administrative expenses	3.92	4.09	3.9	3.59
Other operating expenses	8.60	9.84	10.67	9.93
Finance costs	0.31	0.40	0.00	0.00
Total expenses	100.00	100.00	100.00	100.00

We have already known the main revenues of Hella is sales income, and from Tab. 3.6 we can see the main expenses of Hella is also from sales. The distribution expenses and administrative expenses almost has a stable proportion of total expenses in the past four years. Other operating expenses in 2014 is higher than other three years. In the fiscal year of 2015, Hella group has created approximate 5.8 billion euros by selling their products. They got a great success in that year.

3.2.2 Horizontal common-size analysis of Hella company

This part is horizontal common-size analysis of Hella company. Horizontal common-size analysis is the analysis of the evolution of the financial statements data over the time or their changes with respect to a given period as the benchmark. In the fiscal year 2012/2013, we chose 2012 as the base year, and 2013 is the base year of 2013/2014, 2014 is the base year of 2014/2105. We use horizontal common-size analysis in balance sheet and income statement.

Firstly, we calculate the absolute change of each item in balance sheet, the items are non-current assets, current assets, total assets and so on. The results is shown in Tab. 3.7 and the percentage change of each item in balance sheet is shown as Tab. 3.8.

Tab. 3.7 Absolute change of each item in balance sheet (1000 euro).

	2012/2013	2013/2014	2014/2015
Non-current assets	330769	183376	234880
Current assets	275319	353625	223530
Total assets	606088	537001	458410
Non-current liabilities	545383	107591	-13130
Current liabilities	-81292	294583	-96093
Shareholders' equity	141997	134827	567633

Tab. 3.8 Percentage change of each item in balance sheet (%).

	2012/2013	2013/2014	2014/2015
Non-current assets	21.59	9.84	11.48
Current assets	15.44	17.18	9.27
Total assets	18.28	13.69	10.28
Non-current liabilities	53.58	6.88	-0.79
Current liabilities	-6.60	25.59	-6.65
Shareholders' equity	13.33	11.17	42.30

By using horizontal common-size analysis, we can see that the absolute change of current liabilities in 2012/2013 and in 2014/2015 is negative, it is -6.60 and -6.65, but is positive in 2013/2014, it is 25.59. And the percentage change of non-current liabilities had a large number in 2012/2013, it is 53.58, that means during 2012 to 2013, Hella group got a large number of fixed liabilities.

From Tab. 3.8, we can find there is a huge gap of the percentage change of shareholder's equity from 2013/2014 to 2014/2015. In 2013/2014, the percentage change of shareholder's equity is 11.17, but in 2014/2015, it is 42.30, it in 2014/2015 almost quadruple it in 2013/2014.

We can know the reason of this change is, in 2015 Hella company gets more shareholder's equity. On 11 November 2014, Hella company sales their shares in the market at the price of 27.5 euro, and during 2015, the price of shares has risen up a lot.

We know that shareholder's equity is from shares' selling, so equity in 2015 is more than it in other years.

Then we calculate the absolute change of each item in income statement, the items are sales, cost of sales and so on, the results is in Tab. 3.9. We also calculate the percentage change of each item in income statement, the results is shown as Tab. 3.10.

Tab. 3.9 Absolute change of each item in income statement (1000 euro).

	2012/2013	*2013/2014*	*2014/2015*
Sales	188 865	344 249	491 364
Cost of sales	-111 111	-211 925	-414 390
Gross profit	77 754	132 324	76 974
Other income	12 615	-35 621	16 298
Distribution expenses	-30 628	-13 144	-20 098
Administrative expenses	-17 817	-2 720	552
Other operating expenses	-79 908	-69 440	-6 314
Operating (loss)/profit	**-37 984**	**11 399**	**67 412**
Finance income	-3 956	17 313	15 576
Finance costs	-5 169	19 181	0
EBIT	**-47 109**	**47 893**	**82 988**
Interest	5 953	-5 374	1 879
EBT	**-41 156**	**42 519**	**84 867**
Taxation	16 647	-19 529	-18 996
EAT	**-24 509**	**22 990**	**65 871**

Tab. 3.10 Percentage change of each item in income statement (%).

	2012/2013	*2013/2014*	*2014/2015*
Sales	3.93	6.89	9.20
Cost of sales	3.14	5.80	10.72
Gross profit	6.14	9.84	5.21
Other income	54.83		
Distribution expenses	7.82	3.11	4.62
Administrative expenses	10.07	1.40	-0.28
Other operating expenses	20.58	14.83	1.17
Operating (loss)/profit	**-11.40**	**3.86**	**21.99**
Finance income	-14.87	76.42	38.97
Finance costs	36.89		
EBIT	**-13.63**	**16.04**	**23.95**
Interest	-15.53	16.60	-4.98
EBT	**-13.39**	**15.97**	**27.49**
Taxation	-21.82	32.74	23.99
EAT	**-10.61**	**11.13**	**28.69**

We can see the absolute change of sales and costs of sales has the same trend, they both increase from 2012 to 2015. And the percentage change of financial income has a great change in 2013/2014, it is 76.42%. That shows the financial income in 2014 is great higher than it in 2013.

And from Tab. 3.9 we can see that earning after taxes of Hella company in 2015 is really higher than it in 2014. The reason is in 2015, sales and operating profits of Hella company are higher than them in other years. There are some reasons of this increasing, the first one is in the past 20 years, Hella company is still expanding, sales of this company have increased fourfold in the past 20 years. The second reason is in the recent years, they has a strong growth, in the 2014/2015 fiscal year, Hella company put 544 million euros to develop their technology. And the third reason is aftermarket business segment provides great services to customers, more and more

customers choose their production, so sales increases a lot and has a huge gap from it in 2014.

From Tab. 3.9 we also can see that operating profit in 2015 is more than it in 2014 too. There are two reasons, the one is the administrative expenses in 2015 is really lower than it in 2014, the other one is other operating expenses in 2015 is less than ten times as much as it in 2014.

4. Financial Analysis of Hella Company

In this chapter, we will measure company's financial situation by financial ratio analysis, DuPont analysis and influence quantification. For calculation, we will use methodology and formula which we have written in chapter 2.

And we divide this chapter into six parts: Profitability ratios of Hella company, liquidity ratios of Hella company, solvency ratios of Hella company, activity ratios of Hella company, DuPont analysis of HELLA company and influence quantification of HELLA company.

4.1 Profitability ratios of Hella company

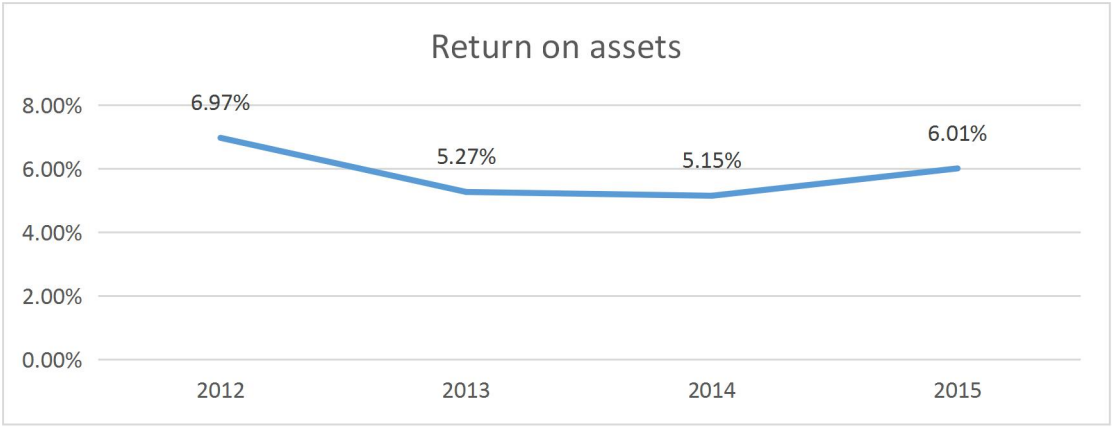
In the first part, we calculate profitability ratios of Hella company by using return on assets, return on equity, net profit margin and operating margin, in order to see the ability of Hella company to get profit during a year. Results is shown in Tab. 4.1 and Chart 4.1

Return on assets

Tab. 4.1 Return on assets of Hella company (%)

	2012	2013	2014	2015
Return on assets	6.97	5.27	5.15	6.01

Chart 4.1 Trend of return on assets.



From Tab. 4.1 and Chart 4.1 we can see return on assets of Hella company in 2013 is less than it in 2012. The reason is that EAT in 2012 is bigger than it in 2013, as the same time total assets in 2012 is smaller than it in 2013. As we have written before, the bigger return on assets is, the better for the company. Return on assets in

2012 is the largest during this four years, so we can say that Hella company in 2012 has the best ability to get profit. The reason is when the company has a higher return on assets, that means they can get more profit from ever unit of assets.

And from Chart 4.1 we can see return on assets in 2013 and 2014 is lower than the other two years. The reason is that during this two years, Hella company get less net income than other two years, and assets of Hella company still increased in the past four years. The reason of assets' increasing is Hella company has a good growth in recent years and is expanding in the past 20 years, so in every year, assets is more than the last year. The reason of net income's decreasing is in these two years, sales of Hella company did not increase a lot, but expenses of operating activities are increased a lot. Like the administrative expenses in 2013 and 2014 are all higher than it in 2012. Because between 2013 and 2014, Hella company expands their business in China and North America, so they need more employees, in order to manage these employees, company need to pay more administrative expenses.

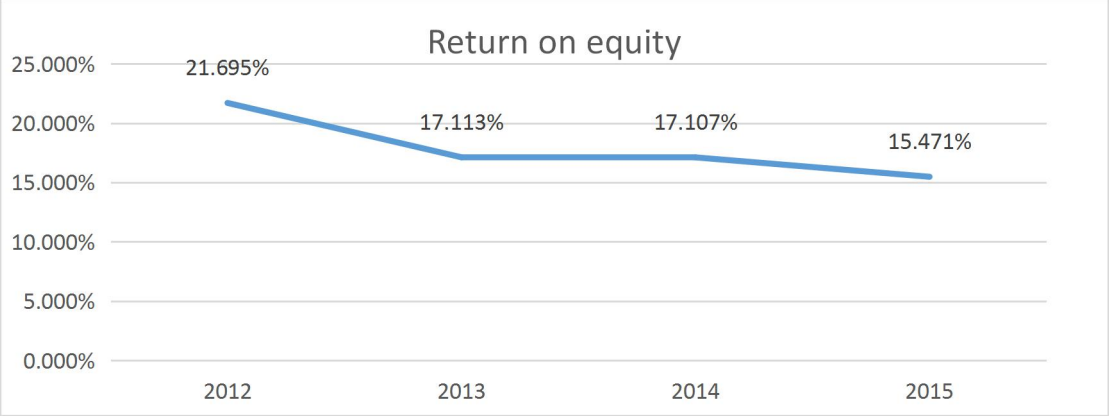
Return on equity

Results of return on equity is shown in Tab. 4.2 and Chart 4.2.

Tab. 4.2 Return on equity of Hella company. (%)

	2012	*2013*	*2014*	*2015*
Return on equity	*21.695*	*17.113*	*17.107*	*15.471*

Chart 4.2 Trend of return on equity of HELLA company.



From Chart 4.2 we can see return on equity is decreasing year by year, return on equity in 2012 is 21.695% and in 2015 is only 15.471%. It really has a big gap

from these two years. From Tab. 3.1 we can see that equity in 2015 is 190 969 4 and in 2012 is 1 065 237, equity in 2015 is almost the twice of it in 2012. And we know the higher return on equity is, the better for the company. Because when the company's return on equity is high, that means when having the same shareholder's equity, this company can get more profit than other companies whose return on equity is lower than this company. So we can say the ability to get profit from ever unit of equity of Hella company in 2012 is the best.

The reason of equity's increasing is that, the price of Hella company's shares still rise up in the recent years. And because Hella company has very good aftermarket services for customers, so more and more people know this company. People who accept this company put into Hella company, capital from shareholders increased, so equity is increasing in the past four years.

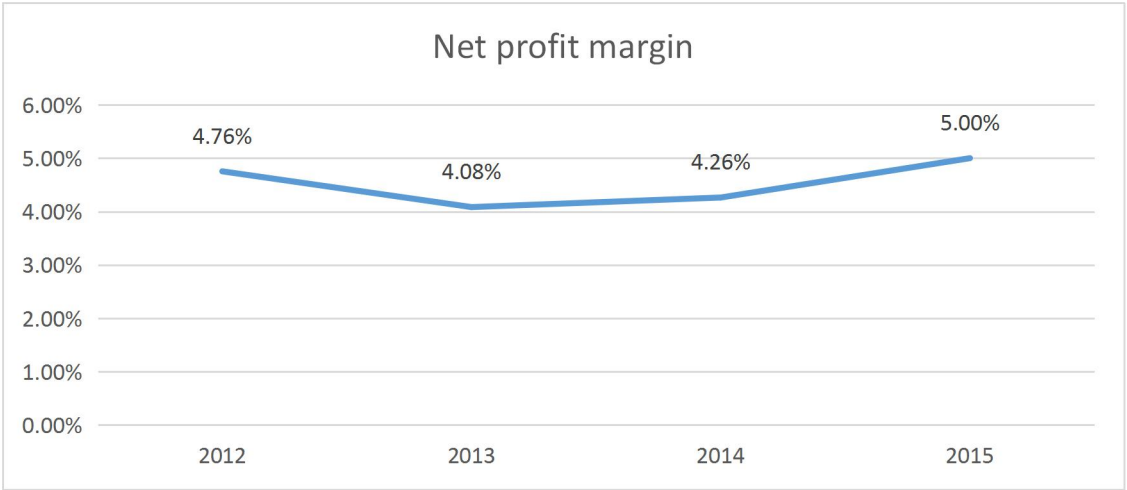
Net profit margin

Results of net profit margin is shown in Tab. 4.3 and Chart 4.3.

Tab. 4.3 Net profit margin of Hella company (%)

	2012	2013	2014	2015
Net profit margin	4.76	4.08	4.26	5.00

Chart 4.3 Trend of net profit margin of HELLA company.



From Tab. 4.3 we can know net profit margin in 2015 is the highest, it is 5.00%. And in 2013 is the lowest, it is only 4.08%. Revenues and EAT both increases during the four years, but the change of revenue from 2015 to 2014 is much bigger

than the change of EAT from 2015 to 2014. From 2014 to 2015 , the group sales rise to around 5.8 billion euros, rise 9% than the last year, but the EAT just rise by 7.6%. So that is the reason why net profit margin in 2015 is the biggest one. And we know that when the company has a bigger net profit margin, that means much more money the company earned is translated into profit, it is very good for the company.

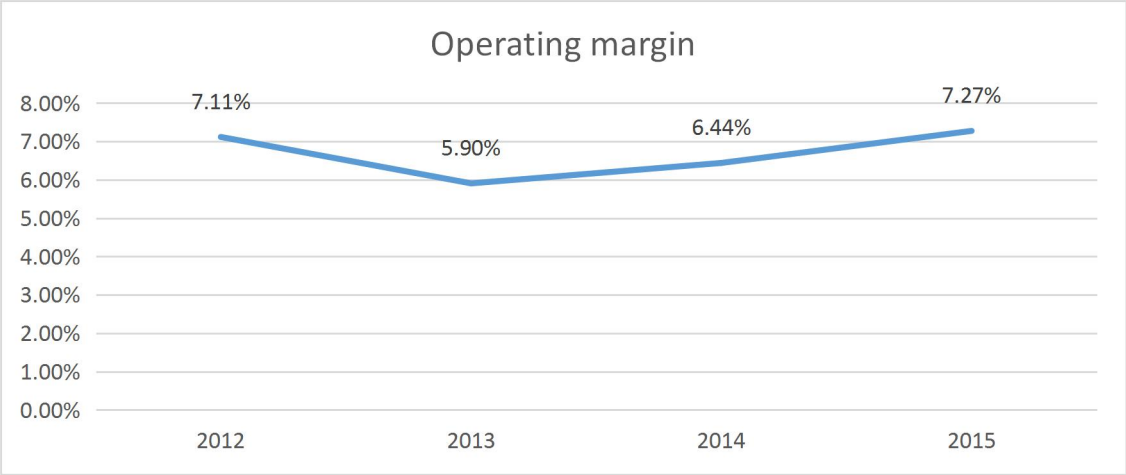
Operating margin

Results of operating margin is shown in Tab. 4.4 and Chart 4.4.

Tab. 4.4 Operating margin of Hella company (%)

	2012	2013	2014	2015
Operating margin	7.11	5.90	6.44	7.27

Chart 4.4 Trend of operating margin of Hella company.



From Tab. 4.4, We can see operating margin in 2012 and in 2015 don't have a large difference, but it in 2013 is lower than it in other three years, it is only 5.90% in that year. The reason is EBIT in 2013 is the lowest, and revenues in 2013 is increased, so operating margin is decreased in 2013. One of the reason of the revenues' increased in 2013 is, in the first quarter of 2013/2014, sales of Hella company rose by 6%.

In 2013, HELLA company has set up some subsidiary companies in different palaces, like China. They want to expanding their business in the whole world, and because more subsidiary companies were founded, they need to get more employees. There are approximate 1000 new employees of Hella company in that year. So they

should to pay more administrative expenses than other years, and operating costs also increased. The decreasing of operating causes net income's decreasing in 2013, and that the reason why operating margin in 2013 is really low.

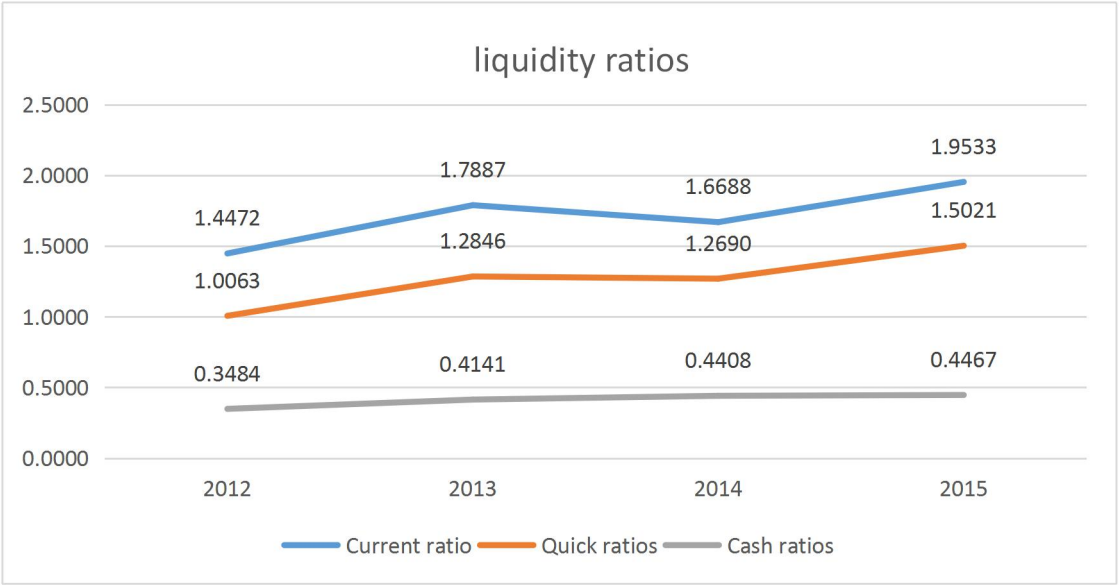
4.2 Liquidity ratios of Hella company

In this part, we use current ratio, quick ratio and cash ratio to measure Hella company's ability to have cash available when needed to meet its short-term debt. Results are presented in Tab. 4.5 And Chart 4.5.

Tab. 4.5 Current ratio, quick ratios and cash ratios of Hella company.

	2012	2013	2014	2015
Current ratios	1.4472	1.7887	1.6688	1.9533
Quick ratios	1.0063	1.2846	1.2690	1.5021
Cash ratios	0.3484	0.4141	0.4408	0.4467

Chart. 4.5 Trend of current ratios, quick ratios and cash ratios.



Current ratio

We can see current ratio is increased in 2015 and is the biggest one in the four years, it is 1.9533. The reason is current assets in 2015 is really higher than it in other three years, and current liabilities is not very high.

We know that in 2014, Hella company become a public company but not only a family-owned company. They issues their shares into the market in Frankfurt stock

exchange, and during 2015 the price increased a lot per share. The issue price of this share is between 25 euros to 28 euros in 2014, and only about 6 months later, the price is rise to around 46 euros per share, it is a good increasing. And because they get lots of capital from people who have purchased their shares, this capital is easy to be translated into cash, so they get more current assets in that year.

Quick ratio

From Chart 4.5, we can see trend of current ratios and quick ratios is the same, they both increased in 2013 and 2015 but decreased in 2014. The reason is almost the same as current ratios. We know the difference between current ratio and quick ratio is, when calculate quick ratio, current assets do not include inventory. And the inventory of Hella company in the past four years almost the same, around 58 billion euros. And because the reason of this ratio's changes is the same as current ratio, we do not repeat it again.

Cash ratio

From Chart 4.5 we can see compare with these three ratios, cash ratios don't have lots changes in the four years. Cash ratios is still increasing, but not very lot. In 2012 it is around 0.35, and in 2015 it is around 0.45. We can know the ability of a company to cover their liabilities by using cash ratio. The higher cash ratio means the company has stronger ability to cover their debt, because when they need money to pay back their debt, they can get more money to be used immediately. So we can write that in 2015, the ability of Hella company to cover their liabilities is the strongest.

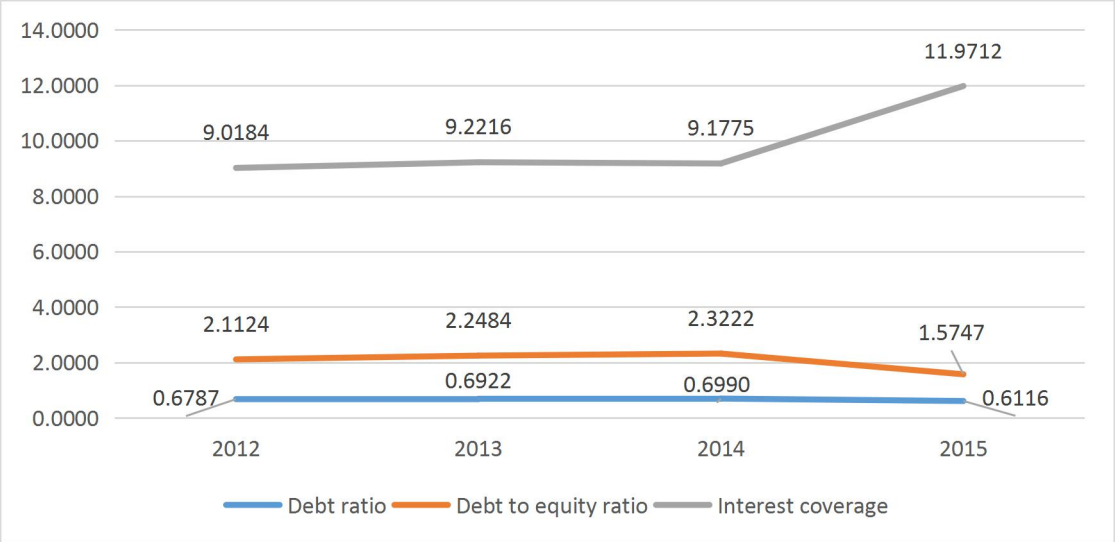
4.3 Solvency ratios of Hella company

In this part, we will use debt ratio, debt to equity ratio and interest coverage to analysis Hella company's abilities to meet its long-term debt. Results is shown in Tab. 4.6 and Chart 4.6.

Tab. 4.6 Debt ratio, debt to equity ratio and interest coverage of Hella company.

	2012	2013	2014	2015
Debt ratio	0.6787	0.6922	0.6990	0.6116
Debt to equity ratio	2.1124	2.2484	2.3222	1.5747
Interest coverage	9.0184	9.2216	9.1775	11.9712

Chart. 4.6 Trend of debt ratio, debt to equity ratio and interest coverage.



Debt ratio

From Tab. 2.6, we can see debt ratio of Hella company from 2012 to 2015 are almost the same, they don't have many changes. Trend of total debt's change and total assets' change is the same, they all increased during the past four years, so debt ratio still keep in a stable level.

And we can know the idea debt ratio of a company is from 0.4 to 0.6, but debt ratio of Hella company is more than 0.6 in the past four years. That not means it is bad for the company. When the debt ratio is higher than the ideal range, means company can get more capital from debtors or investors, they can do more things with these money. But as the same time, company need to face a bigger financial risk, and they should pay more interest.

Debt to equity ratio

We can know debt to equity ratio of Hella company still increased from 2012 to 2014, but the changes is small and it decreased in 2015. We can see equity of Hella

company in 2015 is really higher than it in other years from Tab.4.6, so debt to equity ratio is decreasing in 2015.

The reason we have written before, Hella company become a public company in 2014 and issued their shares. They issued shares on 11 November 2014, the price per share is 27.5 euros and around 6 months later, price per share have risen up to 44.7 euros. We can say it is really a good progress, money from shareholders increased, so equity of Hella company in 2015 is the largest during the past four years.

Interest coverage

From Chart 4.6 we can see interest coverage in 2015 has a great growth, and from 2012 to 2014 it keeps in a stable level. The reason is earning before interest and taxes of HELLA company in 2015 is higher than it in 2012, 2013 and 2014.

In 2015, the sales of Hella company grow by 9%, around 5.83 billion euros, and the adjusted earnings increase to around 445 million euros. As what we have written in chapter 2, when interest paid is high, it is not good for the company, so in 2015, it is the worst situation for Hella company. Because in that year, Hella company has more debt expenses burden than other years.

4.4 Active ratios of Hella company

In this part, we will use average collection period（ACP)，account receivable turnover (ART), inventory turnover (IT) and total assets turnover (TAT) to see how HELLA company to use their assets. Results is shown in Tab. 4.7.

Tab. 4.7 ACP, ART, IT and TAT of Hella company.

	2012	2013	2014	2015
Average collection period (days)	47.93	46.77	46.28	51.16
Account receivable turnover	7.51	7.70	7.78	7.04
Inventory turnover	6.52	6.30	6.69	7.03
Total assets turnover	1.47	1.29	1.21	1.20

Average collection period (ACP)

From Tab. 4.7 we can know average collection period in 2014 is the lowest, it is only 46.28 and in 2015 is the highest, it is 51.16. This ratio shows how many days the company takes to collect the receivables, so from the results in Tab. 4.7 we can know if Hella company want to take their receivables, they should wait for around 50 days. For a company, they want the average collection period can be smaller, because if this period is smaller, that means they can have more number of times of a year to get their receivables, and they also can get more current assets. But for the customers, they hope this period can be longer, so they can have more days to collect the money which need to be paid back to HELLA company.

Account receivable turnover (ACT)

From Tab. 4.7 we can see account receivable turnover of Hella company from 2012 to 2014 are almost the same, but in 2015 is a litter lower than other years, it is only 7.04. This ratio tell us how many times the account receivable are rolled over during a year of a company, so we can know in the past four years, Hella company can take their account receivable around 8 times a year.

Inventory turnover (IT)

From Tab. 4.7 we can see in 2015 inventory turnover of Hella company is the highest, it is 7.03. This ratio tell us how many times inventory is sold during a year, so we can know that the inventory of Hella company can be sold for around 7 times per year. That means, Hella company can sold their inventory per two months.

Total assets turnover (TAT)

As we have written before, we can know the higher the total assets turnover is, the better the company is performing. Because TAT can tell us how successfully the company can use their assets to earn revenue. And from Tab. 4.7, we can see total assets turnover ratio of Hella company in 2012 is highest, it is 1.47. That means, Hella company can get 1.47 euro of revenue per every one euro of assets. So we can write HEELA company performed very well in 2012 if compare with the other three years.

4.5 DuPont analysis of Hella company

In this part, we will use DuPont analysis to analyze Hella company's profit level. Calculation of ROE is based on formula (2.28), (2.29) and (2.30). We know ROE can be divided into five parts, they are net profit margin, assets turnover, financial leverage, tax burden, interest burden and EBIT margin, we will calculate them and results are shown in Tab. 4.8.

Tab. 4.8 The value of each items which are related with ROE.

	2012	2013	2014	2015
Net profit margin	0.0476	0.0408	0.0426	0.0500
Tax burden	0.7518	0.7760	0.7436	0.7506
Interest burden	0.8891	0.8916	0.8910	0.9165
EBIT margin	0.0711	0.0590	0.0644	0.0727
Assets turnover	1.4658	1.2896	1.2074	1.2013
Financial leverage	3.1124	3.2484	3.3222	2.5747
ROE	0.2169	0.1711	0.1711	0.1547

From Tab. 4.8, we can know ROE of Hella company in 2012 is the highest, it is around 0.22, and in the following three years, it still decreased, so in 2015, ROE is the lowest, it is only around 0.15. We know that the company really want to have a higher return on equity, so we can write Hella company in 2012 has the best ROE in the past four years.

As we have written in chapter 2, this ratio measures how many profits the company can get from ever unit of equity. So we can know that Hella company can get around 2.2 euros of profits per 10 euros of equity in 2012, and can get around 1.5 euros of profits per 10 euros of equity in 2015.

There are lots of factors can effect ROE, we will decompose ROE in part 4.6 by using methods of gradual changes and analyze which one is the most important factor.

4.6 Influence quantification of Hella company

In this part, we will use influence quantification to analysis the indicators of ROE of Hella company. Methods of gradual changes is the most convenient method of influence quantification, and because some number of Hella company we use is negative, we can't use logarithmic decomposition method, so we chose methods of gradual changes to do the analysis. We calculate the absolute change of each item of ROE in decomposition. Results are shown in Tab. 4.9.

Tab. 4.9 Absolute change of each item of ROE in decomposition.

	2012/2013	2013/2014	2014/2015
Net profit margin	-0.0067	0.0018	0.0074
Tax burden	0.0242	-0.0324	0.0070
Interest burden	0.0024	-0.0005	0.0254
EBIT margin	-0.0121	0.0053	0.0083
Assets turnover	-0.1762	-0.0822	-0.0062
Financial leverage	0.1360	0.0738	-0.7474
ROE	-0.0458	-0.0001	-0.0164

We chose method of gradual changes to analyze the impact of the changes in component ratios on the basic ratio. There return on equity is the basic ratio, net profit margin, financial leverage and assets turnover is the component ratios. First we make this analysis between 2012 and 2013, results are in Tab. 4.10. And the results of 2013 to 2014 is shown in Tab. 4.11, results of 2014 to 2015 is shown in Tab. 4.12.

Tab. 4.10 Gradual changes of ROE between 2012 and 2013.

	2012	2013	2012/2013(Δa)	ΔXa_i	Order
Net profit margin (a_1)	0.0476	0.0408	-0.0067	-0.0306	1
Assets turnover (a_2)	1.4658	1.2896	-0.1762	-0.0224	2
Financial leverage (a_3)	3.1124	3.2484	0.1360	0.0072	3
Sum				-0.0458	

Tab. 4.11 Gradual changes of ROE between 2013 and 2014.

	2013	2014	2013/2014(Δa)	ΔXa_i	Order
Net profit margin (a_1)	0.0408	0.0426	0.0018	0.0075	2
Assets turnover (a_2)	1.2896	1.2074	-0.0822	-0.0114	1
Financial leverage (a_3)	3.2484	3.3222	0.0738	0.0038	3
Sum				-0.0001	

Tab. 4.12 Gradual changes of ROE between 2014 and 2015.

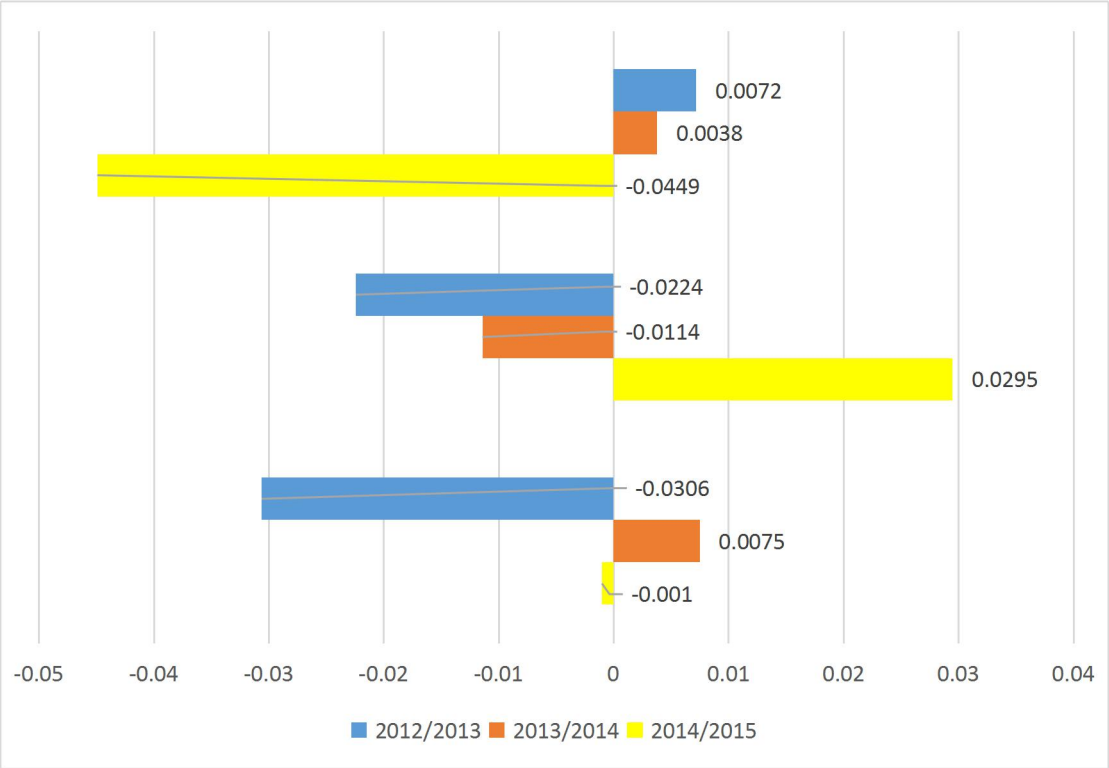
	2014	2015	2014/2015(Δa)	ΔXa_i	Order
Net profit margin (a_1)	0.0426	0.0500	0.0074	-0.0010	3
Assets turnover (a_2)	1.2074	1.2013	-0.0062	0.0295	2
Financial leverage (a_3)	3.3222	2.5747	-0.7474	-0.0449	1
Sum				-0.0164	

The whole results between 2012 to 2015 is shown in Tab. 4.13. We put them together to make the comparison between these three fiscal years. In order to see the results clearly, we make Chart 4.7 to compare them in every year.

Tab. 4.13 Gradual changes of ROE between 2012 and 2015.

ΔXa_i	2012/2013	2013/2014	2014/2015
Net profit margin (a_1)	-0.0306	0.0075	-0.0010
Assets turnover (a_2)	-0.0224	-0.0114	0.0295
Financial leverage (a_3)	0.0072	0.0038	-0.0449
Sum	-0.0458	-0.0001	-0.0164

Chart 4.7 Gradual changes of ROE between 2012 and 2015.



At first, we analyze the situation of each year. From Tab. 4.10 we can know in the fiscal year 2012/2013, the most important factor of ROE is net profit margin, it is -0.0306, the second one is assets turnover, it is -0.0224. And the last one is financial leverage, it is only 0.0072. Because the effect of net profit margin and assets turnover are negative, that means when these two ratio increase, return on equity will be decreased.

From Tab. 4.11 we can know in the fiscal year 2013/2014, assets turnover effect return on equity the most, the next one is net profit margin, it is 0.0075 and the third one is financial leverage, it is 0.0038. Although assets turnover has the biggest impact of return on equity, it's impact is negative, it is -0.0114. That means when assets turnover increase one unit, return on equity will decrease 1.14%.

And from Tab. 4.12, we can know in the fiscal year 2014/2015, financial leverage has the largest impact of return on equity, it is -0.07474, assets turnover is the following one, it is 0.0295. And net profit margin has the smallest impact, it is only -0.0010. Comparing with the impact of assets turnover and financial leverage,

the impact of net profit margin can be ignore, it is really small, it is not necessary to consider it's effect.

Then we will put them together and comparing them. From Tab. 4.13 and Chart 4.7, we can know in different years, the factor which has the strongest impact of return on equity is not the same. And the impact of them can be negative and positive, it depends on the specific situation. We can not sure which factor can effect return on equity the most, we also can not say that the one of the related ratio's effect on return on equity must be good or not. That is the reason why we need to do the analysis every year.

4.7 Summary

In this part, we make a summary of the results from the profitability ratios, liquidity ratios, solvency ratios, activity ratios, DuPont analysis and influence quantification.

From our analyze of the profitability ratios of Hella company, we can know that between 2012 to 2015, the trend of return on assets and return on equity is different, but the trend of net profit margin and operating profit margin is the same. Both of them decreased in 2013 and then increased from 2013 to 2015. We know that the higher the profitability ratio, the better for the company. So the best return on assets of Hella company is in 2012, it is 6.97. The highest return on equity is also in 2011, it is 21.695. The difference is that the highest net profit margin and the highest operating profit margin is in 2015, they are 5.00 and 7.27.

From our analyze of the liquidity ratios of Hella company, we can know that the trend of current ratio is the same as quick ratio. And the highest point and lowest point of current ratio, quick ratio and cash ratio is the same. The highest point is in 2015, the reason is during 2015, Hella company has create lots of capital by selling their shares, the price of share rose up by 80%, around 20 euro per share. we can write that in 2015, the liquidity of Hella company is the best during the past four years.

From our analyze of the solvency ratios of Hella company, we can know the differences of debt to equity ratio and debt ratio between 2012 to 2015 is not very clear, but in 2015, the interest coverage of Hella company has a huge increasing. In

2015, interest coverage is 11.9712, and from 2012 to 2014, it is around 9.1. The reason is sales of Hella company in 2015 increase to around 445 million euros, so operating profit also rose up, this change cause the increasing of interest coverage in that year.

From our analyze of the activity ratios of Hella company, we can know the average collection period of Hella company is from 47 days to 52 days, the average receivable turnover is around 8 times per year, the inventory turnover is 6 to7 times per year and the total assets turnover is around 1.5 times per year. From these numbers we can write that total assets turnover of Hella company is really slow. Based on total assets turnover, we can write that the operating ability of Hella company is not very good, especially in 2015, because this ratio in 2015 is the lowest.

From our analyze of DuPont analysis and influence quantification of Hella company, we can know return on equity of Hella company in 2015 is the lowest and in 2012 is the highest. And the factor which effect return on equity the most is different in every year. In the fiscal year of 2012/2013, the strongest factors is net profit margin, and in 2013/2014, is the assets turnover, in 2014/2015 is the financial leverage. Some influence is positive and some is negative, but the strongest factor which influence the return on equity the most all is the negative influence. That means, if the factor increase, return on equity will be decreased at the same time.

In summary, the profitability of Hella company is really good in 2012 but not very well in 2012. And the liquidity of HELLA company in 2015 is good, in that year, the default risk of Hella company is the lowest during 2012 to 2015. The solvency of Hella company in 2015 is also the best, the ability of Hella company to pay back their liabilities is great in that year. As for the interest coverage of Hella company, it didn't have a huge difference between each year, they are almost the same. Generally speaking, in 2015, Hella company has the highest quality of operating.

We can see that Hella company has a good development in the recent years, if Hella company want to keep their development and get more progress, we have some suggests. First they should strengthen their abilities of control the operating expenses, the costs of sales and the management expenses. Then they should decrease the costs

of produce and increase the net profit of the production's sold. At last they should stick to their development of the technology and science. We believe that Hella company can has a good development in the future.

5. Conclusion

According to these results form different financial analysis methods, we can know lots of information about Hella company's financial health, we know how well they operate their company, their business, their financial services and how did they use the capital and so on. We have a general understanding of Hella company's financial position.

The goal of this thesis was to analyze Hella company's financial position by using common-size analysis, financial ratio analysis and pyramidal decomposition from 2012 to 2015.

This thesis is divided into five parts. The first part is the introduction, the last part is the conclusion. The second part is description of the financial analysis methodology, the third part is financial characteristics of Hella company and the fourth part is financial analysis of Hella company.

In chapter 1, we have introduced the goal of this thesis and the main content in every chapter.

In chapter 2, we have described four methods, they are common-size analysis, financial ratio analysis, DuPont analysis and Influence quantification. We divide common-size analysis into two parts, they are horizontal common-size analysis and vertical common-size analysis. And then we introduce the typical ratios of each classification. Profitability ratios include return on assets, return on equity, net profit margin and operating profit margin. Liquidity ratios include current ratio, quick ratio and cash ratio. Solvency ratios include debt ratio, debt to equity ratio and interest coverage. Activity ratios include average collection period, average receivable turnover, inventory turnover and total assets turnover. And market-based ratios include earning per share, price to equity ratio, dividend payout ratio and dividend yield. And we write three methods of Influence quantification, they are methods of gradual changes, logarithmic decomposition method and functional decomposition method.

In chapter 3, we introduce Hella company on the basic information. We describe their history, their structure and competition. And we make the common-size analysis of Hella company. We know the trends and differences of the data from balance sheet and income statement of Hella company . And in order to make the useful information from these two financial statement clearly, we simplified the balance sheet and income statement and make some adjustment.

In chapter 4, We make financial ratio analysis of Hella company. We know Hella company's profitability from profitability ratios. We know Hella company's liquid assets, short-term liabilities and obligations from liquidity ratios. We know solvency of Hella company from solvency ratios. We also know how well Hella company to use their assets from activity ratios. And in chapter 4, we use method of gradual changes to analyze the impact of the changes in component ratios on return on equity. We divide return on equity into three parts, they are net profit margin, assets turnover and financial leverage, and net profit margin can be divided into three parts as well, they are tax burden, interest burden and EBIT margin. By using this method, we know that the impact of each items is not sure, it can be negative also can be positive. And which one is the strongest factor depends on the specific situation.

In the chapter 5, we make a summary of the whole thesis.

Generally speaking, financial analysis of a company is really useful and important for a company and the related person. And we can know the reason why Hella company can be very famous in the world. They has good after-sale services, has a great management of the company and employees. They has lots of different brand of cars and so on. But the most important reason is their has a suitable financial position according to the thesis. Although there are still some problems and bad situation of Hella company's finance, we believe they can has a progress in the future and has a sustainable development.

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List of Abbreviations

EBIT	Earning before interest and taxes
EBT	Earning before taxes
EAT	Earning after taxes
ROA	Return on assets
ROE	Return on equity
NPM	Net profit margin
OPM	Operating profit margin
ACP	Average collection period
ART	Account receivable turnover
IT	Inventory turnover
TAT	Total assets turnover
EPS	Earning per share
P/E	Price to equity ratio
OP	Operating
REV	Revenue
A	Asset

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Herewith I declare that

- I am informed that Act No. 121/2000 Coll. – the Copyright Act, in particular, Section 35 – Utilization of the Work as a Part of Civil and Religious Ceremonies, as a Part of School Performances and the Utilization of a School Work – and Section 60 – School Work, fully applies to my bachelor thesis;
- I take account of the VSB – Technical University of Ostrava (hereinafter as VSB-TUO) having the right to utilize the bachelor thesis (under Section 35(3)) unprofitably and for own use ;
- I agree that the bachelor thesis shall be archived in the electronic form in VSB-TUO's Central Library and one copy shall be kept by the supervisor of the bachelor thesis. I agree that the bibliographic information about the bachelor thesis shall be published in VSB-TUO's information system;
- It was agreed that, in case of VSB-TUO's interest, I shall enter into a license agreement with VSB-TUO, granting the authorization to utilize the work in the scope of Section 12(4) of the Copyright Act;
- It was agreed that I may utilize my work, the bachelor thesis, or provide a license to utilize it only with the consent of VSB-TUO, which is entitled, in such a case, to claim an adequate contribution from me to cover the cost expended by VSB-TUO for producing the work (up to its real amount).

Ostrava dated 16.04.2016

BiWei Guan 关璐薇

Student's name and surname

List of Annexes

Annex 1: Balance sheet of Hella company. (1000 euros)

	2012	2013	2014	2015
Cash and cash equivalent	429338	476603	637226	602744
Financial assets	42141	207998	354982	405077
Trade receivables	647042	657063	692097	839322
Other receivables and non-financial assets	101961	102348	117630	152010
Inventories	543393	580178	577923	608853
Current tax assets	19518	23290	26537	24504
Non-current assets held for sale	0	11232	5942	3357
Current assets	1783393	2058712	2412337	2635867
Intangible assets	233719	241731	189928	220861
Tangible assets	1092739	1323612	1429608	1612331
Financial assets	20582	20141	19677	19653
Equity accounted investment	86578	115993	239516	266768
Deferred tax assets	81292	123912	126523	118562
Other non-current assets	7144	37435	40948	42905
Non-current assets	1532055	1862824	2046200	2281080
Assets	3315448	3921536	4458537	4916947
Financial liabilities	91700	41966	296412	100221
Trade payables	512321	562425	573533	573893
Current tax liabilities	52049	33135	45943	45776
Other liabilities	451097	429105	420940	556934
Provisions	125103	84347	108733	72644
Current liabilities	1232270	1150978	1445561	1349448
Financial liabilities	679212	1057914	1121252	1038886
Deferred tax liabilities	26128	63314	69006	24882
Other liabilities	66532	184701	219091	236371
Provisions	246069	257395	261566	357646

Non-current liabilities	1017941	1563324	1670915	1657785
Subscribed capital	200000	200000	200000	222222
Reserves and balance sheet results	826815	978984	1112182	1658016
Equity before minorities	1026815	1178984	1312182	1880238
Minority interests	38422	28250	29879	29456
Equity	1065237	1207234	1342061	1909694
Equity and liabilities	3315448	3921536	4458537	4916947

Annex 2: Income statement of Hella company. (1000 euros)

	2012	2013	2014	2015
Sales	4810213	4999078	5343327	5834691
Cost of sales	-3543344	-3654455	-3866380	-4280770
Gross profit	**1266869**	**1344623**	**1476947**	**1553921**
Research and development costs	-388269	-468177	-513545	-543931
Distribution costs	-391589	-422217	-435361	-455459
Administrative costs	-176884	-194701	-19721	-196869
Other income and expenses	23006	35621	-24072	16298
Share of profit and/or loss of associates	20335	15078	37836	55336
Other income from investments	2921	4371	2131	207
Income from securities and other loans	3354	3205		
Other financial result	-14012	-19181		
Earnings before interest and tax on income(EBIT)	**345731**	**298622**	**346515**	**429503**
Interest income	8170	8222	37028	38453
Interest expenses	-46506	-40605	-74785	-74331
Interest result	**-38336**	**-32383**	**-37757**	**-35878**
Earnings before tax on income(EBT)	307395	266239	308758	393625
Taxes on income	-76294	-59647	-79176	-98172
Earnings for the period	**231101**	**206592**	**229582**	**295453**
of which attributable:				
to the owners of the company	222801	201463	222888	286995
to the minority interest	8300	5129	6694	8458